TITLE INDEX

Volume 47

1975

A

Aerofac aerated lagoons (Tikhe) 626
Algal removal using dissolved air flotation (Bare, Jones, Middlebrooks) 153
Ammonia removal from municipal wastewater by ion exchange (Koon, Kaufman) 448
Ammonia volatilization from surface-applied wastewater sludge (Ryan, Keeney) .. 386
An automated spectrophotometric suspended solids analysis for activated sludge (Finger, Strutynski) 1043
Anaerobic acidogenesis of wastewater sludge (Ghosh, Conrad, Klass) 30
Anaerobic decomposition of oil in bottom sediments (Shelton, Hunter) 2256
Anaerobic filter treatment of pharmaceutical waste (Jennett, Dennis) 104
Analysis and characteristics of trichloroethylene wastes (Camisa) 1021
Application of kinetic models to the control of activated sludge processes (Keyes, Asano) 2574
A simple isotope dilution technique for the determination of lead and copper in natural waters (Catanzaro) (Communication) 203
Assessing a marsh environment for wastewater renovation (Steward, Ornes) .. 1880
Average pH (Barth) (Communication) .. 2191

B

Bacterial degradation of motor oil (Walker, Colwell, Petrakis) 2058
Bioassay methods of the National Swedish Environment Protection Board (Hasselrot) 851
Biological treatment of concentrated ammonia wastewaters (Hutton, LaRocca) 989
Biologically mediated inconsistencies in aeration equipment performance (Albertson, DiGregoria) 976, 2711
Cellulose degradation in wastewater treatment (Hofsten, Edberg) 1012

C

Characteristics of distillery wastewater (Basu) 2184
Chemical treatment for phosphate control (DeBoice, Thomas) 2246
Chlorine-containing organic constituents in chlorinated effluents (Jolley) 601
Chromium removal by carbon adsorption (Huang, Wu) 2437
Composting and use of compost in Sweden (Hovsenius) 741
Control of odors at an activated sludge plant (Bhatla) 281
Cooling towers and water quality (Lee, Stratton) 1901

D

Denitrification of concentrated nitrate wastewaters (Jewell, Cummings) 2281
Design criteria for high-purity oxygen treatment of kraft mill effluent (Peterson) 2317
Design, operation, and monitoring of municipal irrigation systems (Malhotra, Myers) 2627
Dewatering of organic sludges by pulverized coal (Hirota, Okada, Misaka, Kato) 2774
Disposal of waste alum sludge from water treatment plants (Gruninger) 543
Diversity of marine invertebrates in a thermal effluent (Logan, Maurer) 515
Dynamic modeling and control strategies for the activated sludge process (Busby, Andrews) 1055
Dynamic water quality management strategies (Lettenmaier, Burges) 2809
Dynamics of nitrification in the activated sludge process (Poduska, Andrews) .. 2599

E

Effect of halogens and ozones on *Schistosoma* ova (Mercado-Burgos, Hoehn, Holliman) 2411
Effect of particulates on virus survival in seawater (Gerba, Schaiberger) 93
Effects of carbonate detergent on biological wastewater treatment (Silberman) ... 524
Effects of detergent formulation on wastewater characteristics and treatment (Shannon) 2371
Effects of salinity on nitrification in the East River (Chen, Canelli, Fuhs) 2474
Effects of salmon cannery wastes on water quality and marine organisms (Beyer, Nakatani, Staude) 1857
Effects of temperature on growth constants of *Selenastrum Capricornutum* (Reynolds, Middlebrooks, Porcella, Grenney) 2420
Effects of temperature on oil refinery waste toxicity (Reynolds, Middlebrooks, Porcella, Grenney) 2674
Effects of wastewater diversion on the lower Madison lakes (Sonzogni, Fitzgerald, Lee) 535

Efficacy of biological nitrification (Sutton, Murphy, Jank, Monaghan) 2665
Environmental effects of advanced wastewater treatment at South Lake Tahoe (Antonucci, Schaumburg) 2694
Environmental effects of dredging and spoil disposal (Jeane, Pine) 553
Environmental protection in kraft pulp mills (Knuts, Albertsson, Sandberg) 783
Equipment manufacturing manpower needs (Middlebrooks, Ettelstein) 428

F

Fate of wastewater sludge in the New York Bight apex (Duedall, O'Connors, Irwin) (Communication) 2702
Field studies of nitrification with submerged filters (McHarness, Haug, McCarty) .. 291
Final disposal of municipal sludge in Sweden (Tullander) 688
Formation of organochlorine compounds from the chlorination of a municipal secondary effluent (Glaze, Henderson) 2511
Formulation and use of practical models for river quality assessment (Hines, Rickert, McKenzie, Bennett) 2357

H

Health significance of airborne microorganisms from wastewater treatment processes Part I: Summary of investigations (Hickey, Reist) 2741
Health significance of airborne microorganisms from wastewater treatment processes Part II: Health significance and alternatives for action (Hickey, Reist) 2758
Heavy metal release by chlorine oxidation of sludges (Olver, Kreye, King) 2490
Heavy metal removal by acclimated activated sludge (Neufeld, Hermann) .. 310
Heavy metal uptake by activated sludge (Cheng, Patterson, Minear) 362
Heavy metals in wastewater in three urban areas (Davis, Jacknow) 2292
High-rate digester mixing study using radioisotope tracer (Zoltek, Gram) 79
Horizontal spread of wastewater field over calm ocean surface (Chao) 2504

I

Industry-community treatment plant (Nilsson) 760
Industry efforts for the environment (Bruneau) 748
Interlaboratory study of methods for chemical analysis of water (Ekendahl, Junker, Röndell) 858

J

Joint treatment of pulping and municipal wastes (Moss, Barton, Byrd, Faulkender) 998

K

Kinetic response of perturbed marine nitrification systems (Srna, Baggaley) .. 472
Kinetics of activated carbon adsorption (Westermark) 704
Kinetics of assimilation of mixed substrates by heterogeneous bacteria (Varma, Weekes, Calvert) 1913
Kinetics of mercury methylation in aerobic and anaerobic aquatic environments (Bisogni, Lawrence) 135

L

Lamella sedimentation: A compact separation technique (Forsell, Hedström) .. 834
Land and sea solids management alternatives in Philadelphia (Guarino, Nelson, Townsend, Wilson, Balloti) 2551
Land application of liquid municipal wastewater sludges (Manson, Merritt) .. 20, 2707
Land disposal of effluent from a sanitary landfill (Nordstedt, Baldwin, Rhodes) 1961
Land disposal of wastewater in Hawaii (Dugan, Young, Lau, Ekern, Loh) .. 2067
Land treatment versus conventional advanced treatment of municipal wastewater (Young, Carlson) 2565
Lime-induced reactions in municipal wastewaters (Merrill, Jorden) 2783
Low-temperature biological denitrification of wastewater (Sutton, Murphy, Dawson) 122

M

MADAM I—A numeric method for design of adsorption systems (Weber, Crittenden) 924
Manitest method for monitoring effluent quality (Elfving, Forsberg, Forsberg) 720
Manpower needs of manufacturing industries (Middlebrooks) 2850
Mercury in anaerobic sludge digestion (Lingle, Hermann) 466
Mercury monitoring technique using an organic substrate (Williams, Coffee) .. 354
Metal-finishing waste treatment in Sweden (Göranson, Moberg) 764
Metal removal by physical and chemical treatment processes (Maruyama, Hannah, Cohen) 962
Microbiology of combined chemical-biological treatment (Unz, Davis) 185
Microbiology of two-stage kraft waste treatment (Liao, Dawson) 2384
Modeling microbial growth in wastewater treatment (Hultman) 843
Modified bioassay procedure for toxic effluents (Eloranta) 2172
Monitoring marine outfalls by using ultraviolet absorbance (Balch, Brown, Pym, Marles, Ellis, Littlepage) 195
Multi-process biological treatment model (Christensen, McCarty) 2652

Municipal wastewater reuse in the U. S. (Schmidt, Kugelman, Clements) 2229

N

Nitrogen removal in a pilot plant (Ericsson) 727
Nonpoint source mineral-water quality model (Betson, McMaster) 2461
Nutrient budgets for the Inner Archipelago of Stockholm (Karlgren, Ljungstrom) 823
Nutrients and algae in some central Iowa streams (Kilkus, LaPerriere, Bachmann) 1870

O

Oil removal by carbon-metal granular beds (Ghosh, Brown) 2101
Oil spill protection in the Baltic Sea (Hagstrom, Landner) 796
Operation of full-scale biological phosphorus removal plant (Levin, Topol, Tarnay) 577
Operational performance of an activated sludge process with constant sludge feedback (Srinivasaraghavan, Gaudy) 1946
Operational practices to upgrade trickling filter plant performance (Shriver, Bowers) 2640
Oxygen transfer efficiency in deep tanks (Schmit, Redmon) 2586
Ozonation of photographic processing wastes (Bober, Dagon) 2114

P

Packed-bed reactors for secondary effluent BOD and ammonia removal (Young, Baumann, Wall) 46
Phosphorus distribution in Blackstrap Lake sediments (Hwang, Huang, Lackie) .. 1081
Phosphorus release during storage of aerobically digested sludge (Eikum, Carlson, Lundar) 330
Phosphorus removal by the addition of aluminum (III) to the activated sludge process (Lin, Carlson) 1978
Phosphorus sources for lower Green Bay, Lake Michigan (Sager, Wiersma) ... 504
Physical-chemical wastewater treatment using a coagulation-adsorption process (Stukenberg) 338
Physicochemical treatment of wastewater-seawater mixture by electrolysis (Poon, Brueckner) 66
Pilot plant treatment of recreational area vault toilet waste (Alleman, Jenkins, Hedstrom, Pochop) 377
Pilot-scale, high-rate biological denitrification (Jeris, Owens) 2043
Poliovirus inactivation by activated sludge (Malina, Ranganathan, Sagik, Moore) 2178
Polymer conditioning of chemical sludges (Novak, O'Brien) 2397
Population dynamics of protozoa in wastewater (Varma, Finley, Bennett) 85
Process control of oxygen-uptake and solids analysis (Benefield, Randall, King) .. 2498
Proportional diluter for effluent bioassays (Riley) 2620

R

Radiometry of water turbidity measurements (McCluney) 252
Recycle of liquor from the heat treatment of sludge (Boyle, Gruenwald) 2482
Reduced cost flocculation of a textile dyeing waste (Kace, Linford) 1971
Removal of color from vegetable tanning solution (Tomlinson, Thackston, Koon, Krenkel) 562
Removal of detergent fluorescent whitening agents from wastewater (Ganz, Liebert, Schultze, Stensby) 2834
Removal of nitrogen from highly nitrogenous wastewaters (Voets, Vanstaen, Verstraete) 394
Removal of soluble phosphorus in an activated sludge plant (Long, Nesbitt) .. 170
Removal of wastewater organics by reverse osmosis (Duvel, Helfgott) 57
Response of activated sludge to step increase in loading (Sherrard, Lawrence) 1848
Response of Lake Superior algae to nutrients and taconite tailings (Plumb, Lee) .. 619

S

Scaling laws for coagulation and sedimentation (Delichatsios, Probstein) 941
Significance of trace metals and nitrates in sludge soils (Brown) 2863
Submerged polyethylene pipes in lakes, rivers, and the sea (Janson) 867
Sulfide reduction in fellmongery effluent by red sulfur bacteria (Cooper, Rands, Woo) 2088
Swedish experiences in chemical treatment of wastewater (Ulmgren) 696
Swedish perspectives on mercury pollution (Jernelöv, Landner, Larsson) 810

T

The recycling of kraft bleach wastes (Sanks) 1924
The relationship between process configuration and process performance (Schroeder) 1005
The release rate of nutrients from river and lake sediments (Fillos, Swanson) 1032
Temperature influence on chemical toxicity to aquatic organisms (Cairns, Heath, Parker) 267
Theoretical heterotrophic yields (Sykes) .. 591
Thermophilic digestion at the Hyperion Treatment Plant (Garber, Ohara, Colbaugh, Raksit) 950
Toxicity of kraft mill wastes to an estuarine phytoplankter (Rainville, Copeland, McKean) 487

Trace elements in biological waste treatment (Wood, Tchobanoglous) 1933
Transport of trace metals by suspended particulates on mixing with seawater (Rohatgi, Chen) 2298
Treatment plant monitoring programs: A preliminary analysis (Berthouex, Hunter) 2143

U

Underground wastewater treatment plants (Isgård) 684
Upgrading lagoon effluent for best practicable treatment (Stone, Parker, Cotteral) 2019
Upgrading primary treatment with chemicals and water treatment sludge (Wilson, Bizzarri, Burke, Langdon, Courson) .. 2820
Use of polyelectrolytes for overloaded clarifiers (Benedek, Bancsi, Rupke) 2447
Use of productivity of periphyton to estimate water quality (Tilley, Haushild) 2157

W

Wastewater treatment at Swedish steel mills (Bengtsson, Halldin, Hallen) 77
Wastewater treatment with an SO_2 removal by-product (Lin) 2271
Water conservation problems in the greater Stockholm region (Cronström) 675
Water pollution from agriculture (Brink) .. 789
Water quality and economic criteria for rural wastewater and water supply systems (Rajagopal, Patterson, Canale, Armstrong) 1834
Water quality monitoring and aquatic organisms: The importance of species identification (Resh, Unzicker) 9
Waterfowl refuge effect on water quality: I. Bacterial populations (Brierley, Brandvold, Popp) 1892

Z

Zooplankton entrainment at three mid-Atlantic power plants (Davies, Jensen) 2130

AUTHOR, SUBJECT, AND GEOGRAPHICAL INDEX

Volume 47

1975

A

Acids, production in two-phase digestion .. 30
Activated carbon, adsorption 338, 704
Activated sludge, microbiology 185, 2384
  nitrogen removal 394
  phosphorus removal 170, 577, 1978
  poliovirus inactivation in 2178
  suspended solids concentration 1043
  treatment of a waste stream 2482
  chemical treatment in 696
  control of 2498
  design criteria 1005
  effect of trichloroethylene on 1021
  effects of detergents on 2371
  effluent monitoring in Sweden 720
  heavy metal removal 310, 362
  aerator performance 976
  modeling and control 1055, 2574
  oxygen aeration 2317
  presence and effects of protozoa 85
  shock loads 1848
  trace elements role 1933
Activated sludge process (Lit. Rev.) 1261
Adsorption, activated carbon 338
  chromium 2437
  color removal from kraft bleach wastes .. 1924
  kinetics 704
  metal removal 962
  numeric method for design 924
  phosphate removal 66
Advanced wastewater treatment, comparison with land treatment 2565
  biological denitrification 2043
  effects of 2694
Aerated lagoons, recreational waste 377
  operational parameters 626
Aeration, oxygen treatment of kraft effluent 2317
  oxygen uptake rate in 976
Aeration basins, causes of odors 281
Aerators, performance of 976
Aerobic processes, model of 2652
Aerosols, wastewater treatment, health effects of 2741
Agriculture, use of secondary effluents 2067
  sludge disposal 688
Agricultural runoff, effect on groundwater .. 789
Agricultural wastes (Lit. Rev.) 1446
Air stripping, for trichloroethylene wastes .. 1021
Albertson, O. E., aeration equpiment performance 976, 2711
Albertsson, U., pulping wastes in Sweden .. 783
Algae, as index of water quality 2157
  effects of nutrients 535, 619, 1870
  effect of nutrients and taconite tailings .. 619
  effect of temperature on toxicity of refinery wastes 2674
  kraft waste toxicity 487
  temperature effects on growth 2420
Algal growth potential, correlation with effluent phosphorus 720
Algae removal, dissolved air flotation 153
Alleman, D. D., recreational waste 377
Alum, coagulation 338
  phosphorus removal 170, 1978
  use with trickling filters 2640
Alum sludge, disposal in water treatment .. 543
Alum, use in primary treatment 2820
Ammonia removal, biological 989
  ion exchange 448
  marine nitrification systems 472
  submerged filters 291
  upflow filters 46
Ammonia stripping, for nitrogen removal .. 727
Ammonia volatilization, sludge disposal 386
Anaerobic processes (Lit. Rev.) 1278
  denitrification of concentrated nitrate wastes 2281
  filtration 104
Analysis, trichlorethylene in wastewater .. 1021
Analysis for chemical species (Lit. Rev.) .. 1118
Analytical methods, proliferation of standard techniques 912
Andrews, J. F., activated sludge process control 1055
  nitrification model 2599
Antonucci, D. C., environmental effects of advanced treatment 2694
Aquatic organisms, chemical toxicity and temperature effects 267
Aquatic sediments (Lit. Rev.) 1611
Armstrong, J. M., rural water and wastewater systems 1834
Asano, T., kinetic models activated sludge process 2574
Assimilation, of nutrients in marshes 1880
Audits, EPA construction grant projects 1825
Automated analysis (Lit. Rev.) 1241
Automation, treatment plants 2353
Automation of treatment systems (Lit. Rev.) 1369

B

Bachmann, R. W., stream sampling 1870
Bacteria, activated sludge process 2384
  degradation of motor oil 2058
  growth models 843
  sulfide reduction 2088
Bacterial content, wastewater aerosols 2758
Bacterial degradation, of cellulose fibers .. 1012

Bacterial pathogens, occurrence and detection (Lit. Rev.) 1581
Bacterial populations, waterfowl refuge water quality 1892
Baggaley, A., marine nitrification systems .. 472
Balch, N., ultraviolet absorbance 195
Baldwin, L. B., land disposal 1961
Ballotti, E. F., solids disposal 2551
Bancsi, J. J., polyelectrolyte addition to clarifiers 2447
Bare, W. F. R., algae removal 153
Barth, E. F., calculating average pH 2191
Barton, C. A., joint treatment 998
Basu, A. K., distillery wastewater 2184
Baumann, E. R., packed-bed reactors 46
Benedek, A., polyelectrolyte addition to clarifiers 2447
Benefield, L. D., process control 2498
Bengtsson, B., steel mill wastes 773
Bennett, G. H., protozoa in wastewater treatment 85
Bennett, J. P., river quality assessment 2357
Benthal deposits, nutrient release, oxygen demand 1032
Benthos, oil decomposition in 2256
temperature effects 515
Berthouex, P. M., plant monitoring 2143
Betson, R. P., nonpoint source model 2461
Beyer, D. L., salmon cannery waste 1857
Bhatla, M. N., odor control in activated sludge plants 281
Bioassays, fish toxicity 851
for toxic effluents 2172
importance of taxonomy in 9
of wastewater effluents 2620
Biochemical oxygen demand
See BOD
Biological filter for wastewater treatment (Lit. Rev.) 1258
carbonate detergents in 524
Biological processes, denitrification 122
model of 2652
in Sweden 696
of milk processing wastes 760
two-stage lagoons 626
Biomass, theoretical yields 591
Bisogni, J. J., Jr., mercury methylation 135
Bizzarri, R. E., primary treatment 2820
Blackstrap Lake (Saskatchewan), phosphorus in sediments 1081
Blowdown, cooling tower effluent quality .. 1901
Bober, T. W., ozonation of photographic wastes 2114
BOD, as index of substrate assimilation 1913
of distillery wastewater 2184
of influent wastewater 2574
BOD removal, aerated lagoon system 377
upflow filters 46
Bowers, D. M., trickling filters 2640
Boyle, J. D., sludge liquor recycle 2482
Brandvold, D. K., bacterial populations 1892
Breakpoint chlorination, for nitrogen removal 727
Brierley, J. A., bacterial populations 1892
Brink, N., agricultural waste problems 789
Bromine, effect on Schistosomes 2411
Brown, D., ultraviolet absorbance 195
Brown, R. E., sludge disposal 2863
Brown, W. P., oil removal 2101
Brueckner, T. G., physicochemical treatment 66
Bruneau, L., industrial pollution control in Sweden 748
Bulking, role of trace elements 1933
Burges, S. J., water quality management .. 2809
Burke, T., primary treatment 2820
Burrows, W. D., landfill leachates 921
Busby, J. B., activated sludge process control 1055
Byrd, J. F., joint treatment 998

C

Cairns, J., Jr., chemical toxicity 267
Calcium compounds, phosphate and turbidity removal 2271
Calvert, A. F., substrate assimilation kinetics 1913
Camisa, A. G., trichloroethylene waste 1021
Canale, R. P., rural water and wastewater systems 1834
Canelli, E., nitrification 2474
Catanzaro, E. J., lead and copper contaminant analysis 203
Carbon adsorption, for decolorizing kraft bleach waste 1924
Carbon dioxide, role in phosphate precipitation 2246
Carbonate detergent, effect on biological treatment 524
Carbon-metal beds, for oil removal 2101
Carlberg, S., pollution control in Sweden .. 664
Carlson, D. A., phosphorus release from sludge 330
phosphorus removal 1978
Carlson, G. A., wastewater treatment 2565
Cell yield, in activated sludge model 1946
theoretical 591
Cellulose degradation, in activated sludge process 1012
Chao, J. L., ocean outfalls 2504
Chemical industry waste (Lit. Rev.) 1517
Chemical precipitation, in activated sludge process 696
Chemical toxicity, temperature effects on .. 267
Chemical treatment (Lit. Rev.) 1249
addition to primary 2820
alum use in trickling filters 2640
effect on biological nitrification 2665
for phosphate removal 2246
steel mill wastes 773
sludge conditioning 2397
Chen, K. Y., metals transport 2298
Chen, M., nitrification 2474
Cheng, M. H., heavy metal uptake 362
Chlorination (Lit. Rev.) 1323
for oxidation of metal finishing wastes ... 764
nitrogen removal 66
organochlorine compound 601, 2511
Chlorine, effect on Schistosomes 2411

Chlorine oxidation, for sludge digestion 2490
Chlorophyll, estimate of algal biomass 2157
Christensen, D. R., multi-process model ... 2652
Chromium, adsorption from dilute solution . 2437
Clarification, by lamella sedimentation 834
effect of protozoa on 85
Clarifiers, overloading controlled by 2447
Clay, virus adsorption 93
Clements, E. V. III, reuse of municipal wastewater 2229
Cleveland-Wright Bill, PL 92-500 changes proposed 1827
Clinoptilolite, ammonia removal by 448
Coagulation, alum addition to trickling filters 2640
in turbulent pipe flow 941
metal removal 962
of textile wastes 1971
physical-chemical treatment 338
tanning waste color removal 562
Coal filter, for sludge dewatering 2774
Coal mine drainage (Lit. Rev.) 1466
Coffee, G. L., mercury monitoring 354
Cohen, J. M., metal removal 962
Coke, for adsorption of chromium 2437
Colbaugh, J. E., thermophilic sludge digestion 950
Collection systems (Lit. Rev.) 1335
submerged plastic pipe 867
Color removal, from kraft mill wastes 1924
from tanning wastes 562
Colwell, R. R., bacterial degradation 2058
Combined sewers (Lit. Rev.) 1352
Composting, sludge disposal 2551
Computers, nitrification model 2599
Conditioning, chemical sludges 2397
Conrad, J. R., two-phase digestion 30
Conservation of water resources, in Sweden 675
Construction grants
See Federal construction grants
Continuous culture, in activated sludge process 1946
Continuous monitoring, automated analysis and sampling procedure (Lit. Rev.) .. 1241
Control, activated sludge process 1055, 2498
Cooling towers, blowdown quality 1901
Cooling water, use of municipal effluents for 2229
Cooling water systems, in power plants 2130
Cooper, D. E., sulfide reduction 2088
Copeland, B. J., kraft waste toxicity 487
Cost comparison, advanced land treatment . 2565
Costs, allocations in joint treatment 998
irrigation systems 2627
of reclaimed wastewater 2229
of wastewater treatment in Sweden 675
rural water and wastewater systems 1834
underground treatment plants 684
Cotteral, J. A., lagoons 2019
Courson, C. M., primary treatment 2820
Criteria, for rural system design 1834
Crittenden, J. C., adsorption design 924
Cronström, A., water conservation 675
Crop irrigation, effect of detergent components 2834
Cummings, R. J., denitrification 2281

D

Dagon, T. J., ozonation of photographic wastes 2114
Dairy waste, municipal treatment of 760
Dairy wastes (Lit. Rev.) 1513
Davies, R. M., zooplankton entrainment in cooling towers 2130
Davis, J. A., activated sludge, microbiology 185
heavy metals 2292
Dawson, R. N., activated sludge microbiology 2384
denitrification 122
DeBoice, J. N., phosphate removal 2246
Deep tanks, oxygen transfer in 2586
Degradation, of cellulose fibers 1012
of motor oil 2058
de Haan, S., land disposal 2707
Delichatsios, M. A., coagulation and sedimentation 941
Denitrification, concentrated nitrate wastewaters 2281
high-rate biological 2043
kinetics 122
Dennis, N. D., Jr., anaerobic filtration 104
Design criteria, activated sludge process ... 1005
irrigation systems 2627
oxygen treatment of kraft effluent 2317
oxygen transfer efficiency 2586
Design guidelines, ocean outfalls 2504
Detergents (Lit. Rev.) 1273
effects of various formulations 2371
Dewatering, alum sludge from water treatment 543
by pulverized coal 2774
thermophilic sludge digestion 950
Digestion, aerobic, phosphorus release from sludges 330
anaerobic, two-phase 30
mercury 135
mixing 79
DiGregoria, D., aeration equipment performance 976
Dilution, effect on nitrification, East River . 2474
Disease, relation of bacterial aerosols from wastewater to 2758
Diseases, waterborne (Lit. Rev.) 1566
Disinfection (Lit. Rev.) 1323
against Schistosomes 2411
physicochemical treatment 66
Dispersion, ocean outfalls 2504
of oil spills, in Baltic Sea 796
Disposal, wastewater solids 2551
of rural wastewater 1834
of sludge in Sweden 688
Dissolved air flotation, algal removal 153
Dissolved oxygen
See DO
Distillery wastewater, characteristics 2184
Diversity index, thermal effects on 515
DO, effects of dredging on 553
benthal effects 1032
Dredging, environmental effects 553
Drug wastes, anaerobic filtration 104

Duedall, I. W., sludge in New York Bight . 2702
Dugan, G. L., land disposal of effluents 2067
Duvel, W. A., Jr., reverse osmosis, organics 57
Duwamish River (Wash.), estimate of water quality 2157

E

Economics of pollution control, Sweden ... 673
Economics of wastewater treatment (Lit. Rev.) 1789
Edberg, N., cellulose degradation in activated sludge process 1012
Editorial, construction grant program 1
danger of public negativism 2543
interceptor sewers 911
NCWQ draft report 2349
proposed PL 92-500 changes 1823
public participation 2733
research priorities 234
standard methods proliferation 421
wastewater personnel unionism 2011
WPCF annual conference 2217
WPCF literature review 1117
Effluent irrigation, land reclamation 1961
Effluent plume, ocean outfalls 2504
Effluent quality, monitoring of 720
Effluent restrictions, on metal wastes in Sweden 764
Effluents, biological denitrification 122
chlorinated organics in 601, 2511
Eikum, A. S., phosphorus release from sludge 330
Ekendahl, G., water analysis 858
Ekern, P. C., land disposal of effluents 2067
Electrolysis, oil removal 2101
Elfving, E., effluent quality monitoring 720
Ellis, D., ultraviolet absorbance 195
Eloranta, V., bioassay procedure for toxic effluents 2172
Energy requirements, for sludge digestion . 950
of advanced treatment 2694
Enrichment, nutrient rate of 1880
Entrainment, of zooplankton in cooling towers 2130
Environmental effects, advanced wastewater treatment 2694
Environmental impact statement, importance of taxonomy 9
EPA needs survey of 1974, findings of 422
Ericsson, B., nitrogen removal 727
Estuaries, algal growth in 2157
salmon cannery wastes 1857
Estuarine pollution (Lit. Rev.) 1617
Ettelstein, M. S., manpower needs 428
Eutrophication (Lit. Rev.) 1538
phosphorus in sediments 1081
Stockholm Archipelago 823
Everglades National Park, wastewater renovation in 1880

F

Facultative conditions, in aerated lagoons . 626
Farm crops, irrigation with wastewater sludge 20
Faulkender, C. R., joint treatment 998
Federal construction grant program, state needs 422
Federal construction grants, additional delays (Editorial) 1
EPA audits of 1825
possible program changes 1829
program problems 2221
Federal Water Pollution Control Act, amendments considered 239
amendments to (HR 9560) 2737
proposed amendments to (Editorial) 1823
Section 208 planning 2015
tardy implementation 424
Feed patterns, for activated sludge process control 1055
Fellmongery effluent, red photosynthetic bacteria, sulfide reduction 2088
Fermentation industry waste (Lit. Rev.) .. 1398
Fertilizer manufacturing wastes, ammonia removal 989
Fertilizer, sludge used as 2863
Fillos, J., nutrient release 1032
Filters, nitrification 291
Filtration, anaerobic, drug wastes 104
carbon-metal beds for oil removal 2101
effect on nitrification, East River 2474
metal removal 962
steel mill wastes 773
Financing, joint treatment 998
Finger, R. E., suspended solids analysis 1043
Finley, H. E., protozoa in wastewater treatment 85
Fish, effects of chemical toxicity and temperature 267
Fish toxicity, laboratory tests 851
Fitzgerald, G. P., wastewater diversion 535
Flocculation, of textile waste 1971
Flotation, algal removal 153
Flow dilution, for on-site bioassays 2620
Fluidized-bed reactors, for biological denitrification 2043
Food processing waste, treatment of trichloroethylene 1021
Food processing wastes (Lit. Rev.) 1381
Forest cover, use in predicting water quality 2461
Forsberg, Å., effluent quality monitoring ... 720
Forsberg, C., effluent quality monitoring ... 720
Forsell, B., lamella sedimentation 834
Fox River, Wis., phosphorus sources 504
Freshwater fish, effects of pollution (Lit. Rev.) 1711
Fruit, vegetable, and grain processing wastes (Lit. Rev.) 1389
Fuhs, G. W., nitrification 2474
Fungi, activated sludge process 2384

G

Ganz, C. R., detergent whiteners 2834
Garber, W. F., thermophilic sludge digestion 950
Gaudy, A. F., performance model of activated sludge process 1946
Gearheart, R. A., algae removal 2333

Geology, use in predicting water quality ... 2461
Gerba, C. P., virus survival 93
Ghosh, M. M., oil removal 2101
Ghosh, S., two-phase digestion 30
Glaze, W. H., organochlorine compounds in secondary effluents 2511
Göranson, B., metal finishing wastes 764
Gram, A. L., mixing studies 79
Great Britain, water law of 919
Green Bay, Wis., joint treatment 998
Grenney, W. J., algae removal 2333
algal growth kinetics 2420
refinery waste toxicity 2674
Groundwater, effect of pollution (Lit. Rev.) 1600
effects of agricultural wastes 789
effects of sludge metals 741
nitrates in rural areas 1834
pollution, by sludge 2863
Gruenwald, D. D., sludge liquor recycle ... 2482
Gruninger, R. M., alum sludge disposal 543
Guarino, C. F., solids disposal 2551
Guidelines, sludge disposal in Sweden 688

H

Hagstrom, Å., oil spill protection 796
Halldin, A., steel mill wastes 773
Hallén, L., steel mill wastes 773
Hamilton, M. A., biological diversity indexes 630
Hannah, S. A., metal removal 962
Hasselrot, T. B., bioassay methods 851
Haug, R. T., nitrification 291
Haushild, W. L., periphyton as index of water quality 2157
Health effects, wastewater aerosols 2758
Heat treatment, filter cake production 2482
Heath, A. G., chemical toxicity 267
Heavy metals, in sludge composting 741
mercury pollution 810
release by chlorine oxidation of sludge .. 2490
removal by activated sludge 310, 362
sources 2292
Heavy metals and other trace elements (Lit. Rev.) 1635
Hedström, B., lamella sedimentation 834
Hedstrom, W. E., recreational waste 377
Helfgott, T., reverse osmosis organics 57
Henderson, J. E. IV, organochlorine compounds in secondary effluents 2511
Hermann, E. R., heavy metal removal 310
mercury in digestion 466
Hickey, J. L. S., wastewater aerosols 2741
High-rate digestion, mixing 79
Hines, W. G., river quality assessment 2357
Hirota, M., sludge dewatering with pulverized coal 2774
Hoehn, R. C., Schistosome removal 2411
Hofsten, B. V., cellulose degradation in activated sludge process 1012
Holliman, R. B., Schistosome removal 2411
Household systems, costs of 1834
Hovsenius, G., sludge composting 741
Huang, C.-p., chromium adsorption 2437
Huang, P. M., phosphorus distribution in lakes 1081
Hultman, B., microbial growth models 843
Hunter, J. V., oil decomposition in sediments 2256
Hunter, W. G., plant monitoring 2143
Hutton, W. C., ammonia removal 989
Hwang, C. P., phosphorus distribution in lakes 1081
Hydraulic detention time, effect on effluent 2574
Hydrogen sulfide, role in trace element removal 1933
Hydrology, of rivers 2357
Hyperfiltration, organics removal 57

I

Impounded PL 92-500 funds, issues before Supreme Court 2
release of 426
Indexes, diversity and redundancy (Hamilton) (Communication) 630
Industrial wastes (Lit. Rev.) 1381
chemical treatment of 696
control in Sweden 748
drug manufacture, anaerobic filtration ... 104
effect of temperature on refinery waste toxicity 2674
metal finishing in Sweden 764
municipal treatment of dairy effluent ... 760
pulp and paper mill 2317
recycling of kraft bleach wastes 1924
salmon canneries 1857
sulfide reduction 2088
textile dye treatment 1971
treatment, manpower needs 2850
Industrial wastewater, NPDES program ... 236
Industrial water supply, reuse of municipal effluents 2229
Industry, pollution control in Sweden 748
Infectivity, of poliovirus 2178
Inorganic species, analysis of in water (Lit. Rev.) 1118
Instrumentation and automation of wastewater treatment systems (Lit. Rev.) .. 1369
Interceptor sewers, federal funding of construction (Editorial) 911
Iodine, effect on Schistosomes 2411
Ion exchange, for ammonia removal 448
for decolorizing kraft bleach wastes 1924
metal finishing wastes 764
Iowa streams, nutrients and algae in 1870
Irrigation, aerated lagoon system 377
wastewater solids 2551
with secondary effluents 2067
Irrigation systems, design and operation ... 2627
Irwin, B., sludge in New York Bight 2702
Isgård, E., underground treatment plants .. 684

J

Jacknow, J., heavy metals 2292
Jank, B. E., biological nitrification 2665
Janson, L. E., submerged plastic pipe 867
Jeane, G. S. II, dredging effects 553
Jenkins, S. R., recreational waste 377
Jennett, J. C., anaerobic filtration 104

Jensen, L. D., zooplankton entrainment in cooling towers ... 2130
Jeris, J. S., biological denitrification ... 2043
Jernelöv, A., mercury pollution ... 810
Jewell, W. J., denitrification ... 2281
Joint treatment, for dairy wastes ... 760
municipal and pulping wastes ... 998
Jolley, R. L., chlorine-containing organic compounds ... 601
Jones, N. B., algal removal ... 153
Jorden, R. M., lime treatment ... 2783
Junker, P., water analysis ... 858

K

Kace, J. S., dye wastes ... 1971
Kalinske, A. A., aeration equipment performance ... 2711
Karlgren, L., nutrients in Stockholm Archipelago ... 823
Kato, K., sludge dewatering with pulverized coal ... 2774
Kaufman, W. J., ammonia removal by ion exchange ... 448
Keeney, D. R., land disposal ... 386
Keyes, T. W., kinetic models activated sludge process ... 2574
Kilkus, S. P., stream sampling ... 1870
Kinetics, activated sludge performance ... 1946
effects of temperature on algal growth ... 2420
denitrification ... 122
mercury methylation ... 135
of substrate assimilation ... 1913
King, P. H., chlorine oxidation of sludge ... 2490
process control ... 2498
Klass, D. L., two-phase digestion ... 30
Knuts, A., pulping wastes in Sweden ... 783
Koon, J. H., ammonia removal by ion exchange ... 448
color removal ... 562
Kormanik, R. A., batch flotation tests ... 1087
Kraft wastes, toxicity to algae ... 487
Krenkel, P. A., color removal ... 562
Kreye, W. C., chlorine oxidation of sludge ... 2490
Kugelman, I., reuse of municipal wastewater 2229

L

Lackie, T. H., phosphorus distribution in lakes ... 1081
Lagoons, red sulfur-reducing bacteria ... 2088
aerated, recreational waste ... 377
aerobic-facultative operation ... 626
nitrification ... 2019
solids removal ... 2019
upgrading effluent ... 2019
Lagoons and oxidation ponds (Lit. Rev.) ... 1269
Lake Superior, algae ... 619
Lakes, phosphorus in sediments ... 1081
Lamella sedimentation, for sludge treatment 834
Land disposal ... 386
detergent whiteners in sludge ... 2834
effect of trace metals and nitrate ... 2863
irrigation systems ... 2627
of landfill effluent ... 1961
of municipal effluents ... 2229
sludge ... 20, 688, 2551
Land disposal of wastewater (Lit. Rev.) ... 1344
for irrigation ... 2067
Land treatment, advanced treatment ... 2565
Land treatment of wastewater, technical and political status of ... 232
Land use, effect on groundwater nitrates ... 1834
Landner, L., mercury pollution ... 810
oil spill protection ... 796
Langdon, P. E., Jr., primary treatment ... 2820
LaPerriere, J. D., stream sampling ... 1870
LaRocca, S. A., ammonia removal ... 989
Larsson, T., mercury pollution ... 810
Lau, L. S., land disposal of effluents ... 2067
Lawrence, A. W., mercury methylation ... 135
shock loads ... 1848
Lee, G. F., algal response ... 619
cooling tower effluents ... 1901
wastewater diversion ... 535
Legislation (Lit. Rev.) ... 1796
amendments to PL 92-500 ... 239
British water law ... 919
Cleveland-Wright PL 92-500 changes ... 1827
HR 9560 amendments to PL 92-500 ... 2737
oil spills, in Sweden ... 796
PL 92-500 implementation ... 424
pollution control in Sweden ... 664
Safe Drinking Water Act ... 4
Leininger, Kurt V., batch flotation tests ... 1086
Lettenmaier, D. P., water quality management ... 2809
Levin, G. V., phosphorus removal ... 577
Liao, C. F.-H., activated sludge microbiology ... 2384
Liebert, C., detergent whiteners ... 2834
Liedberg, A., pollution control in Sweden ... 669
Lime, coagulation, physical-chemical treatment ... 338
phosphate and turbidity removal ... 2271
precipitation, for wastewater treatment ... 2783
Lin, P.-W., treatment with SO_2-removal by-product ... 2271
Lin, S. S., phosphorus removal ... 1978
Linford, H. B., dye wastes ... 1971
Lingle, J. W., mercury in digestion ... 466
Liquor recycle, from treatment of sludge ... 2482
Literature summary, bacterial aerosols from wastewater treatment processes ... 2741
Littlepage, J., ultraviolet absorbance ... 195
Livestock wastes, problems and treatment ... 789
Ljungström, K., nutrients in Stockholm Archipelago ... 823
Loading, shock, response of activated sludge process ... 1848
Logan, D. T., invertebrate diversity in thermal effluents ... 515
Loh, P. C. S., land disposal of effluents ... 2067
Long, D. A., phosphorus removal ... 170
Lundar, A., phosphorus release from sludge 330
Lundkvist, S., pollution control in Sweden ... 673

M

Macroinvertebrates, effect of pollution (Lit. Rev.) ... 1520

Magnetic separation, steel mill wastes 773
Malhotra, S., irrigation systems 2627
Malina, J. F., Jr., poliovirus inactivation .. 2178
Management system design, water quality . 2809
Manpower needs, manufacturing industries, wastewater treatment 2850
water and wastewater equipment and supplies industry 428
Manson, R. J., land disposal 20, 2707
Manufacturing industries, wastewater treatment manpower 2850
Marine and estuarine pollution (Lit. Rev.) 1617
Marine disposal, salmon cannery wastes ... 1857
Marles, E., ultraviolet absorbance 195
Marshall, G. R., algae removal 2333
Marshes, wastewater renovation in 1880
Maruyama, T., metal removal 962
Mathematical models, effect of temperature on toxicity 2674
in adsorption design 924
microbial growth 843
nitrification 2599
Maurer, D., invertebrate diversity in thermal effluents 515
McCarty, P. L., multi-process model 2652
nitrification 291
McCluney, W. R., turbidity measurements . 252
McHarness, D. D., nitrification 291
McKean, W. T., kraft waste toxicity 487
McKenzie, S. W., river quality assessment . 2357
McMaster, W. M., nonpoint source model. . 2461
Mean cell residence time, control of activated sludge process 2574
Meat, fish, and poultry processing wastes (Lit. Rev.) 1381
Membrane filtration, organics removal 57
Mercado-Burgos, N., Schistosome removal . 2411
Mercury, methylation kinetics 135
pollution 810
sludge digestion 135, 466
Mercury monitoring, artificial substrate technique 354
Merritt, C. A., land disposal 20, 2707
Merrill, D. T., lime treatment 2783
Mesophilic digestion, comparison with thermophilic 950
Metal removal, physical-chemical treatment 962
Metal wastes, treatment methods in Sweden 764
Metal-carbon beds, for oil removal 2101
Metals, chromium adsorption 2437
in cooling tower blowdown 1901
removal by activated sludge 310
sources 2292
uptake by activated sludge 362
trace, in activated sludge process 1933
Methane, production in two-phase digestion 30
Methylation of mercury, in aquatic environment 810
Methylmercury, sludge digestion 466
Microbial communities, mercury concentration 354
Microbial degradation, of oil spills, in Baltic Sea 796
Microbiology, activated sludge 185
activated sludge process with bleaching wastes 2384
of waste treatment (Lit. Rev.) 1559
of water (Lit. Rev.) 1543
Microorganisms, effects of chemical toxicity and temperature 267
growth models 843
Middlebrooks, E. J., algae removal ... 153, 2333
algal growth kinetics 2420
manpower needs 428, 2850
refinery waste toxicity 2674
Milk processing wastes, joint treatment of . 760
Minear, R. A., heavy metal uptake 362
Misaka, Y., sludge dewatering with pulverized coal 2774
Mixing, of suspended particulates with seawater 2298
Mixing and transport (Lit. Rev.) 1769
Mixing studies, radioisotope tracers 79
Moberg, P. O., metal finishing wastes 764
Modeling, river quality assessment 2357
Models, for lime addition 2783
nonpoint sources 2461
multi-process 2652
Monaghan, B. A., biological nitrification ... 2665
Monitor, amendments to PL 92-500 239
British water law 919
Canadian views at WPCF conference 2546
Cleveland-Wright PL 92-500 changes ... 1827
construction grant changes 1829
construction grants problems 2221
EPA audits of construction grant projects . 1825
EPA needs survey of 1974 422
EPA programs reviewed at WPCF conference 2548
EPA toxic waste standards 2734
EPA's Rhett views WPCF 2218
HR 9560 amendments to PL 92-500 2737
impounded PL 92-500 funds 2
impounded PL 92-500 funds released ... 426
land treatment of wastewater 232
national issues at WPCF conference 2544
NCWQ report 2351
NPDES program status 236
planning under Section 208, PL 92-500 . 2015
plant automation 2353
public sector unions 2012
research and development office of EPA . 915
Safe Drinking Water Act 4
standard analytical methods 912
tardy implementation of PL 92-500 424
WPCF in 1975 2225
Monitoring, irrigation systems 2627
land disposal of wastewater sludge 20
methods for effluent quality 720
marine outfalls 195
program for small plant 2143
Moore, B. E. D., poliovirus inactivation ... 2178
Moss, O. H., joint treatment 998
Motor oil, bacterial degradation 2058
Multiple regression analysis, comparison of treatment techniques 2565
Muncie, Ind., heavy metals sources 2292
Municipal effluents, effects of detergents ... 2834

reuse of ... 2229
Municipal wastewater, cellulose fiber content 1012
treatment ... 2565
Murphy, K. L., biological nitrification ... 2665
chlorination of secondary effluents ... 1088
denitrification ... 122
Myers, E. A., irrigation systems ... 2627

N

Nakatani, R. E., salmon cannery waste ... 1857
National Commission on Water Quality, report of (Editorial) ... 2349
staff report of ... 2351
Needs survey 1974, EPA findings ... 422
Nelson, M. D., solids disposal ... 2551
Nesbitt, J. B., phosphorus removal ... 170
Neufeld, R. N., heavy metal removal ... 310
New York City, heavy metals sources ... 2292
Nilsson, L., joint industrial municipal treatment in Sweden ... 760
Nitrates, biological removal ... 122, 2043, 2281
in rural groundwater ... 1834
in sludge soils ... 2863
Nitrification, lagoons ... 2019
marine systems kinetics ... 472
model ... 2599
salinity effects, East River ... 2474
submerged filters ... 291
Nitrification-denitrification, pilot plant study 727
Nitrogen, as limiting nutrient ... 727
biological nitrification ... 2599, 2665
removal from fertilizer manufacturing wastes ... 989
ammonia volatilization in land disposal ... 386
Nitrogen removal by activated sludge ... 394
biological, chemical treatment ... 394
breakpoint chlorination ... 66
in a pilot plant ... 727
monitoring of effluent quality ... 720
Nonpoint sources, mathematical model ... 2461
of phosphorus in Green Bay ... 504
Nordstedt, R. A., land diposal ... 1961
Novak, J. T., polymer sludge conditioning ... 2397
NPDES program, status of ... 236
NTA, effects of detergents ... 2371
Numeric method, adsorption design ... 924
Nutrient release rate, benthal deposits ... 1032
Nutrient removal, highly nitrogenous wastes 394
Nutrients, algal response to ... 619
analysis of in Sweden ... 858
chemical analysis of ... 858
in cooling tower blowdown ... 1901
in effluents used for irrigation ... 2067
biological nitrification ... 2599, 2665
phosphorus sources in lower Green Bay ... 504
relation to algae growth ... 2157
Stockholm Archipelago ... 823
wastewater renovation in marshes ... 1880
in sludge for land disposal ... 20

O

O'Brien, J. H., polymer sludge conditioning 2397
Ocean outfalls, dispersion ... 2504
Ocean dispersal, wastewater solids ... 2551
O'Connors, H. B., sludge in New York Bight 2702
Odor control, effect of sludge deposits ... 281
Ohara, G. T., thermophilic sludge digestion 950
Oil, bacterial degradation ... 2058
decomposition in sediments ... 2256
removal in carbon-metal beds ... 2101
Oil refinery wastes, effect of temperature on toxicity ... 2674
Oil spills, in Baltic Sea ... 796
Okada, H., sludge dewatering with pulverized coal ... 2774
Olsson, I., pollution control in Sweden ... 669
Olver, J. W., chlorine oxidation of sludge ... 2490
Operation, activated sludge process ... 1005, 2498
industrial treatment facilities ... 2850
irrigation systems ... 2627
primary treatment ... 2820
trickling filters ... 2640
Optical parameters, turbidity measurements 252
Optimization, sampling frequency ... 2143
Organic compounds, marine outfalls ... 195
Organic mercury, sludge digestion ... 466
Organic species, analysis for (Lit. Rev.) ... 1169
Organic substrate, use in mercury monitoring ... 354
Organics removal, reverse osmosis ... 57
Organism motility, entrainment in cooling towers ... 2130
Organochlorine compounds, in effluent 601, 2511
Ornes, W. H., wastewater renovation in marshes ... 1880
Ouano, E. A. R., completely mixed versus plug flow ... 2516
Outfalls, marine, monitoring ... 195
submerged plastic pipe ... 867
Owens, R. W., biological denitrification ... 2043
Oxygen aeration, pulp and paper mill effluent ... 2317
Oxygen consumption, in cellulose degradation ... 1012
Oxygen demand, benthal deposits ... 1032
Oxygen sag and stream purification (Lit. Rev.) ... 1595
Oxygen transfer, efficiency of in deep tanks 2586
Oxygen uptake rate, in aerator design ... 976
Oxygenation, factors in ... 976
Ozonation, photographic processing wastes ... 2114
Ozone, effect on Schistosomes ... 2411

P

Packed-bed reactors, effluent polishing ... 46
Paper and allied products (Lit. Rev.) ... 1402
Parker, B. C., chemical toxicity ... 267
Parker, D. S., algae removal ... 47, 2330
lagoons ... 2019
Pathogenic bacteria, occurrence, detection (Lit. Rev.) ... 1581
Pathogens, in wastewater aerosols, health effects of ... 2741
Patterson, J. W., heavy metal uptake ... 362
Patterson, R. L., rural water and wastewater systems ... 1834

Periphyton, index of water quality 2157
Permits, in water quality management 2809
Personnel hiring, water and wastewater equipment and supplies industry 428
projected needs 2850
Peterson, R. R., pulp and paper mill effluent treatment 2317
Petrakis, L., bacterial degradation 2058
Petroleum, bacterial degradation 2058
Petroleum processing wastes (Lit. Rev.) ... 1476
Phosphate, removal by calcium compounds . 2271
removal by chemical treatment 2246
Phosphate detergent, comparison with carbonate 524
Phosphate release rates, benthal deposits ... 1032
Phosphate removal, adsorption 66
Phosphates, effects of detergent 2371
Phosphorus, distribution in lake sediments . 1081
loadings of 535
release from stored sludges 330
removal, activated sludge 170
removal by biological methods 577
removal from lime-treated wastewater ... 2783
removal by polyelectrolytes 2447
sources in lower Green Bay 504
reduction by chemical treatment 696
removal by activated sludge 185
monitoring of effluent quality 720
wastewater treatment 1978
Photographic processing wastes, ozonation . 2114
Physical-chemical treatment (Lit. Rev.) ... 1249
metal removal 962
raw wastewater 338
seawater-wastewater electrolysis 66
Pine, R. E., dredging effects 553
Pipe, plastic type for submerged applications 867
Pittsburgh, Pa., heavy metals sources 2292
Plankton, kraft waste toxicity in estuaries .. 487
Planning, underground treatment plants ... 684
Plant toxicity, from trace metals 2863
Plastic pipe, for submerged applications ... 867
Plating and cyanide wastes (Lit. Rev.) 1479
Plating wastes, chromium adsorption 2437
Plumb, R. H., Jr., algal response 619
Pochop, L. O., recreational waste 377
Poduska, R. A., nitrification model 2599
Poliovirus, inactivation by activated sludge 2178
Polyelectrolytes, color removal by flocculation 1971
for improving clarifier performance 2447
for tanning waste color removal 562
Polymers, for chemical sludge conditioning . 2397
Poon, C. P. C., physicochemical treatment . 66
Popp, C. J., bacterial populations 1892
Population trends, water conservation problems in Sweden 675
Porcella, D. B., algae removal 2333
algal growth kinetics 2420
refinery waste toxicity 2674
Power plants, zooplankton entrainment in cooling systems 2130
Power requirements, in activated sludge plants 281
Precipitation, phosphorus removal ... 577, 2246
Primary treatment, upgrading by chemical addition 2820
Probstein, R. F., coagulation and sedimentation 941
Proportional diluter, design of 2620
Protozoa, activated sludge process 2384
presence in wastewater treatment 85
Public participation, pros and cons of (Editorial) 2733
Public relations, importance of (Editorial) 2543
Pulp and paper industry, pollution control in Sweden 748
Pulp bleaching wastes, effect on activated sludge microbiology 2384
control in Sweden 783
degradation of cellulose 1012
joint treatment 998
Pulp and paper wastes, oxygen activated sludge treatment 2317
toxicity to algae 487
water reuse 1924
Pym, R., ultraviolet absorbance 195

R

Radioactive wastes (Lit. Rev.) 1498
Radioactivity, tritium-labeled poliovirus ... 2178
Rainville, R. M., kraft waste toxicity 487
Rajagopal, R., rural water and wastewater systems 1834
Raksit, S. K., thermophilic sludge digestion . 950
Randall, C. W., process control 2498
Rands, M. B., sulfide reduction 2088
Ranganathan, K. R., poliovirus inactivation . 2178
Reaction order, of substrate assimilation ... 1913
Recirculation, digester mixing 79
for pulping waste control 783
steel mill wastes 773
Reclamation, by sanitary landfill 1961
of municipal effluent 2229
Reclamation and reuse (Lit. Rev.) 1338
Recreational waste treatment, pilot plant study 377
Redmon, D. T., oxygen transfer 2586
Refineries, effect of temperature on waste toxicity 2674
Regional cooperation, on water conservation in Sweden 675
Regional systems, for wastewater disposal . 1834
Reist, P. C., wastewater aerosols 2741
Research and development, EPA reorganization 915
Talley heads EPA office of 915
Research priorities, WPCF position paper (Editorial) 234
Resh, V. H., species identification in water quality monitoring 9
Reverse osmosis, organics removal 57
Reynolds, J. H., algal growth kinetics 2420
algae removal 2333
refinery waste toxicity 2674
Rhett, J. T., interview with EPA construction grants director 2218
Rhodes, L. M., land disposal 1961

Rickert, D. A., river quality assessment 2357
Riley, C. W., proportional diluter 2620
Rivers, models for study of 2357
River quality assessment, by modeling 2357
Rohatgi, N., metals transport 2298
Röndell, B., water analysis 858
Rowe, R. S., landfill leachates 921
Rupke, J. W. G., polyelectrolyte addition to clarifiers 2447
Rural wastewater systems, criteria for 1834
Ryan, J. A., land disposal 386

S

Safe Drinking Water Act, provisions of 4
Sager, P. E., phosphorus sources 504
Sagik, B. P., poliovirus inactivation 2178
Salinity effects, nitrification, East River 2474
Salmon canneries, waste discharges from ... 1857
Sampling frequency, optimization 2143
Sandberg, S. O., pulping wastes in Sweden . 783
Sanks, R. L., kraft bleach waste 1924
Sawyer, C. N., chlorination of secondary effluents 1087
Scaling laws, coagulation and sedimentation systems 941
Schaiberger, G. E., virus survival 93
Schaumburg, F. D., environmental effects of advanced treatment 2694
Schistosomes, effects of disinfection 2411
Schmidt, C. J., reuse of municipal wastewater 2229
Schmit, F. L., oxygen transfer 2586
Schroeder, E. D., activated sludge process . 1005
Schultze, J., detergent whiteners 2834
Seawater, virus survival 93
Seawater-wastewater mixture, electrolysis .. 66
Secondary effluent, chlorination of 2511
Secondary effluents, used for irrigation 2067
Secondary treatment, removal of detergent whiteners 2834
Sediment, oil decomposition in 2256
Sedimentation, coagulation as aid 941
metal finishing wastes 764
metal removal 962
Sediments, motor oil degradation in 2058
nutrient release rates 1032
Selenastrum capricornutum, temperature effects on growth kinetics 2420
Septic tank, effects of carbonate detergents . 524
Septic tanks, costs in rural areas 1834
Shannon, E. E., effects of detergent builders 2371
Shelton, T. B., oil decomposition in sediments 2256
Sherrard, J. H., shock loads 1848
Shock loading, response of activated sludge process 1848
Shriver, L. E., trickling filters 2640
Silberman, H. C., carbonate detergent in biological treatment 524
Simulation, activated sludge process 1055
Sludge, conditioning 2397
digestion by chlorine oxidation 2490
disposal alternatives 2551
disposal of alum-containing 543
land disposal of 20
phosphorus release 330
water treatment, addition to primary treatment 2820
Sludge composting, field study in Sweden .. 741
Sludge digestion, mercury 466
thermophilic process for 950
Sludge dewatering, by pulverized coal 2774
Sludge disposal, ammonia volatilization 386
on land 2863
metal finishing wastes 764
Swedish methods 688
Sludge handling, pulp and paper mill treatment 2317
Sludge handling and disposal (Lit. Rev.) .. 1306
heat treatment 2482
Sludge production, effect of carbonate detergents 524
Sludge recycle, effect on process performance 1946
Sludge treatment, detergent whiteners in .. 2834
Small plant, monitoring program 2143
Snoeyink, V. L., MBAS adsorption 1089
Soil, effect on ammonia volatilization 386
Soil characteristics, effect on wastewater disposal 1834
Solid-liquid separation, lamella sedimentation 834
Solid wastes and water quality (Lit. Rev.) . 1493
Solids removal, lagoon effluent 2019
Solids retention time, effect on activated sludge 1848
effect on biological nitrification 2665
Solubility products, for characterization of solids 2783
Sonzogni, W. C., wastewater diversion 535
South Lake Tahoe, environmental effects of advanced wastewater treatment 2694
Species identification, role in water quality criteria 9
Spectrophotometric analysis, suspended solids 1043
Srinivasaraghavan, R., performance model of activated sludge process 1946
Srna, R. F., marine nitrification systems ... 472
Standard analytical methods, proliferation of (Editorial) 912
Standards, administration and surveys (Lit. Rev.) 421
Staude, C. P., salmon cannery waste 1806
Steel industry wastes (Lit. Rev.) 1857
Steel mills, waste treatment 1473
Stensby, P. S., detergent whiteners 773
Step-feed process, control 2834
Steward, K. K., wastewater renovation in marshes 1055
Stockholm, Sweden, nutrient budgets 1880
Stone, R. W., lagoons 823
Stratton, C. L., cooling tower effluents 2019
Stream sampling, in Iowa 1901
Strutynski, B. J., suspended solids analysis . 1870
Stukenberg, J. R., physical-chemical treatment 1043
Submergence, as related to oxygen transfer efficiency 338
2586

Substrate assimilation, kinetics of 1913
Substrate concentration, in activated sludge process 1946
Sugar wastes, characteristics 2184
Sulfur reduction, red photosynthetic bacteria 2088
Sulfur bacteria, in lagoons 2088
Sulfur dioxide removal, by-product use for wastewater treatment 2271
Surface waters and groundwater, effects of pollution (Lit. Rev.) 1600
Suspended particulates, transport of trace metals by 2298
Suspended sediments, effect on bacterial populations in waterfowl refuge 1892
Suspended solids, effect on virus survival .. 93
spectrophotometric analysis 1043
turbidity measurements of 252
Suspended solids concentration, activated sludge 1043
biological denitrification 122
Sutton, P. M., biological nitrification 2665
denitrification 122
Swanson, W. R., nutrient release 1032
Sweden, chemical treatment methods in ... 696
industrial pollution control 748
mercury pollution research 810
oil spill protection 796
pollution control legislation 669
pulping waste control 783
steel mill waste treatment 773
water conservation problems 675
Sykes, R. M., theoretical cell yields 591
Systems analysis (Lit. Rev.) 1783

T

Taconite tailings, algal response to 619
Tanning wastes, color removal 562
Tarnay, A. G., phosphorus removal 577
Taxonomy, role in water quality criteria ... 9
Tchobanoglous, G., trace elements 1933
Temperature, benthic organism diversity ... 515
effect on algal growth 2420
effect on biological nitrification 2665
effect on refinery waste toxicity 2674
effect on trickling filter efficiency 2640
influence on chemical toxicity 267
effect on denitrification 122
Tench, H. B., mean cell residence time 1091
Textile manufacturing wastes (Lit. Rev.) . 1465
Thackston, E. L., color removal 562
Thermal effects (Lit. Rev.) 1656
Thermal effluents, diversity of invertebrates in 515
Thermophilic digestion, operational characteristics of 950
Thomas, J. F., phosphate removal 2246
Tikhe, M. L., aerated lagoons 626
Tilley, L. J., periphyton as index of water quality 2157
Tomlinson, H. D., color removal 562
Topol, G. J., phosphorus removal 577
Townsend, S., solids disposal 2551
Toxic effluents, bioassay procedures for 2172
Toxic wastes, EPA standards 2734
Toxicity, chemical, temperature influence on 267
effect of temperature 2674
effects of dredging on 553
of kraft mill wastes 487
of oil spills 796
reduction in kraft mill effluent 2317
Trace elements, in activated sludge process . 1933
Trace metals, in sludge soils 2863
transport by suspended particulates 2298
Tracers, mixing studies 79
Transfer efficiency, of oxygen in deep tanks 2586
Treatment plants, underground 684
Trichloroethylene waste, analysis and treatment of 1021
Trickling filter, wastewater treatment 2482
Trickling filters, wintertime operation 2640
TSS, of effluent wastewater 2574
Tullander, V., sludge disposal 688
Turbidimeters, comparison of 252
Turbidity, measurements of 252
removal by calcium compounds 2271
Turbulent flow, site for coagulation 941

U

Uhte, W. R., algae removal 2330
Ulmgren, L., chemical waste treatment 696
Ultraviolet absorbance, marine outfalls 195
Underground treatment plants, advantages of 684
Unionism, in the public sector 2012
of wastewater personnel (Editorial) 2011
Unz, R. F., activated sludge, microbiology . 185
Unzicker, J. D., species identification in water quality monitoring 9
Upflow filters, ammonia removal 46
BOD removal 46
Urban runoff (Lit. Rev.) 1352

V

Vanstaen, H., nitrogen removal 394
Varma, M. M., protozoa in wastewater treatment 85
substrate assimilation kinetics 1913
Vault toilets, recreational waste, pilot plant study 377
Verstraete, W., nitrogen removal 394
Virus, inactivation by activated sludge 2178
Viruses, detection, occurrence, and removal (Lit. Rev.) 1587
survival in seawater 93
Voets, J. P., nitrogen removal 394

W

Walker, J. D., bacterial degradation 2058
Wall, D. J., packed-bed reactors 46
Warrington, S. L., WPCF in 1975 2225
Wastewater disposal, effect on water quality 2157
Wastewater diversion, effect on water quality 535
Wastewater renovation, in marsh environment 1880
Wastewater toxicity, to aquatic life 2620

Wastewater treatment, aerated lagoon system, recreational waste 377
ammonia removal by ion exchange 448
by lime 2783
chemical 1971
comparison of techniques for 2565
fellmongery effluent, sulfide reduction ... 2088
in Sweden 673, 727
Wastewater treatment, irrigation systems .. 2627
manpower needs in manufacturing industries 2850
phosphorus removal 1978
electrolysis 66
underground plants 684
Water and wastewater equipment and supplies industry, manpower needs 428
Water characteristics, analysis for (Lit. Rev.) 1161
Water conservation, in Sweden 664, 675
Waterfowl refuge, effect of bacteria on water quality 1892
Water pollution control, in Sweden 669
industrial wastes in Sweden 748
Water quality 535
decomposition effects of benthal deposits 1032
criteria for rural wastewater systems 1834
effect of salmon cannery waste 1857
effect of wastewater diversion 535
effect of waterfowl refuge on 1892
effect on water reuse 2229
interlaboratory study of analytic methods 858
management system design 2809
nonpoint source model 2461
periphyton as index of 2157
varying tolerance of within genus 9
Water reuse, in kraft pulp mills 1924
municipal effluents 2229
Water supply, costs and criteria in rural areas 1834
Water treatment, alum sludge disposal 543
Water treatment sludge, addition to primary treatment 2820
Waterborne diseases (Lit. Rev.) 1566
Weber, W. J., Jr., adsorption design 924
Weekes, M. C., substrate assimilation kinetics 1913
Westermark, M., adsorption kinetics 704
Wiersma, J. H., phosphorus sources 504
Williams, L. G., mercury monitoring 354
Wilson, T. E., primary treatment 2820
solids disposal 2551
Woo, C.-P., sulfide reduction 2088
Wood, D. K., trace elements 1933
Worms, effects of disinfection on Schistosomes 2411
WPCF annual conference, mood at Miami Beach (Editorial) 2217
WPCF organization *See* Yearbook
Wu, M-H., chromium adsorption 2437
Wuerthele and Riley, proportional diluter .. 2620

Y

Yearbook (published as 47, March Part II)
WPCF organization 1
Committee directory, WPCF 32
Honors and awards, WPCF 39
Information sources on water pollution control 70
Author's Guide for JWPCF 93
Membership information, WPCF 105
Products and processes 171
Yields, theoretical heterotrophic 591
Young, C. E., wastewater treatment 2565
Young, J. C., packed-bed reactors 46
Young, R. H. F., land disposal of effluents .. 2067

Z

Zaloum, R., chlorination of secondary effluents 1088
Zeolite, ammonia removal by 448
Zoltek, J., Jr., mixing studies 79
Zooplankton, entrainment 2130